APPENDIX E: COMMUNICATIONS

INTRODUCTION

Finance units at all levels require communications modes and means to transmit voice and automated data information. This appendix covers those modes and means.

COMMUNICATION MODES

Mobile Subscriber Equipment (MSE) is a fully automated area communications system. It ensures that mobile and static subscribers, regardless of location, can communicate via a nodal system throughout the battlefield. MSE is the communications network for corps and divisions. MSE is a SECRET high network. All equipment attached to the network is classified SECRET. All personnel operating on the network must have a SECRET security clearance.

MSE is designed to meet the requirements of a five division corps for a secure area switched system capable of supporting dispersed command posts. Using MSE, finance units have the ability to communicate with supported units, supporting units, deployed finance detachment and finance support teams, and other finance units.

Personnel may enter the MSE system via digital telephone or combat net radio. User-owned equipment may consist of Digital Non-Secure Voice Telephone (DNVT), facsimile terminal (FAX), or a secure Mobile Subscriber Radio Terminal (MSRT). Financial management data is transmitted from the AO to home station via MSE.

The DNVT is a telephone with a built-in data port used for computer and record traffic facility transmissions. Units are responsible for laying wire to connect the DNVT to a nearby junction box. Signal personnel will then lay wire from the signal-operated systems to the junction box.

FAX terminals provide a rapid method of transmitting messages over wire or radio circuits. Messages are received and transmitted in the form of paper copy. The FAX provides high-speed, high-quality graphic communications. The terminal connects directly into the DNVT data port. The FAX can also send/receive text and graphic communications over wire. FAX capability must be provided down to detachment and team level and must be highly mobile and durable, given the operating environment and missions.

MSRT consists of a radio and secure telephone terminal with data interface capabilities. The MSRTs can be vehicular-mounted or can be set up within a shelter.

Corps and echelons above corps (EAC) signal support units have the capability to provide unclassified data transmission capability out of the AO via MSE. Many of these units have the Network Encryption System (NES) which encrypts data that passes through it, allowing the data to be transmitted over the MSE network without the possibility of mixing classified and unclassified data. Data is uploaded from an

unclassified system, through the NES, across the MSE network to another NES, which is connected to a satellite shot out of the AO.

The Enhanced Position Location Reporting System (EPLRS) is a version of the Global Positioning System. EPLRS will be the data radio of the battlefield for division and below units. Once deployed, EPLRS will be the primary mode of transmitting data on the battlefield. EPLRS will also be classified SECRET high. Tactical finance units require EPLRS to conduct mobile and split-based operations. EPLRS provides the capability of data transmission as well as team/unit location.

FINCOMs and FGs have satellite communications means with the International Maritime Satellite (INMARSAT) earth station. INMARSAT provides direct voice and data transmission capability from anywhere in the world. FINCOMs and FGs also have military satellite capability via corps level signal assets.

COMMUNICATIONS MEANS

There are several means of communication available to the finance unit commander. These should be used in the best combination to complement each other. These communication means are wire, radio, visual signals, sound, messenger and satellite.

Satellite

Satellite communications are a common means of communication from the AO to the sustainment base component. Military satellites connections are usually located at corps level signal support units. Commercial satellite connections may be available but can be expensive to use.

Wire

Wire is the primary means used for internal communications. Use of wire communications prevents hostile forces from using radio direction finding (RDF) equipment to locate the unit. Wire use is restricted mainly by mobility requirements, distance between users, installation and recovery time, and maintenance. Wire requires care in installation to preclude damage. Internal wire may be integrated with radio means to increase the capability of communications with outside units. Net radio interface (NRI) permits voice communications between radio users and telephone system subscribers either from radio to telephone or visa versa so long as the radio user is within range of the NRI station.

Radio

A finance unit's communications cannot depend on wire communication only. Each finance unit must also utilize frequency modulation (FM) communications systems in lieu of and as a supplement to wire communications.   Communications must be available at all times to accomplish various and concurrent missions.   Financial management support is not static. Finance Support Teams (FSTs) go to units to provide support. Radio communication must be available at all levels down to FST to maintain constant communications with higher command levels as well as supported units. These communication requirements include data transmission as well as voice capability.

Radio systems are easier to use and quicker to install than wire, but are susceptible to detection by enemy RDF equipment, which can locate receivers and transmitters. The enemy can monitor transmissions, jam communications, or bring direct or indirect fire weapons to bear on the position of the transmitter/receiver.

Visual Signals

Leaders may use visual signals to send prearranged messages quickly over short distances and to identify friendly units.   These include hand and arm signals, flags, panels, lights, and pyrotechnics. Visual signals, however, are easily misunderstood and may be seen by the enemy.   Meanings for visual signals must be clearly stated in the unit's SOP, operation order, or Signal Operating Instructions (SOI).

Sound

Whistles, sirens, gongs, shots, and explosive devices may be used for sound communications. Leaders may use these signals to send prearranged messages, attract attention, and spread alarms. They are good for short distances only. Their range and reliability may be reduced by other noise. Meanings for sound signals must be clearly stated in unit SOPs, operations orders, or SOIs.

Messenger

Messengers are the most secure means of communication and are ideal for transmitting lengthy written messages. A messenger's speed depends on the mode of travel, the tactical situation, and terrain. Messengers are also vulnerable to enemy action. Finance unit leaders should use messengers only as a backup to other means and modes of communication or when message length dictates their use.